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14 CFR Part 170

Establishment and Discontinuance Criteria for LORAN-C; Nonprecision Approach Procedures; Proposed Rule

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 170

[Docket No. 26758; Notice No. 92-1]

RIN 2120-AD68

Establishment and Discontinuance Criteria for LORAN-C; Nonprecision Approach Procedures

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Notice of proposed rulemaking (NPRM).

SUMMARY: This proposed rule prescribes benefit-cost based criteria for the establishment and discontinuance of LORAN-C nonprecision approach procedures at airports. Under the proposed criteria, the FAA would consider traffic density, passengers served, and aircraft operating efficiencies along with the cost of establishing and maintaining an approach. The criteria would provide a guide to FAA management to assure the cost-effective placement of LORAN-C approaches. This regulation, if promulgated, would implement the requirements of Public Law 100-223, which requires the publication of criteria for navigational aids and airport traffic control towers.

DATES: Comments must be received on or before April 30, 1992.

ADDRESSES: Send comments on the rule in triplicate to: Federal Aviation Administration, Office of the Chief Counsel, Attn: Rules Docket (AGC-210), Docket No. 26758, 800 Independence Ave., SW., Washington, DC 20591; or deliver comments in triplicate to: FAA Rules Docket, room 915-G, 800 Independence Ave., SW., Washington, DC 20591.

Comments may be examined in the Rules Docket, weekdays except Federal Holidays, between 8:30 a.m. and 5 p.m.

FOR FURTHER INFORMATION CONTACT: Mr. Frank Emerson, Office of Aviation Policy and Plans (APO-220), Federal Aviation Administration, 800 Independence Ave., SW., Washington, DC 20591; telephone (202) 267-3298.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to participate in these preliminary rulemaking procedures by submitting such written data, views, or arguments as they may desire. Communications should identify the regulatory docket or notice number and be submitted in triplicate to the address above. All communications received on or before the closing date for comments will be considered by the Administrator before taking further rulemaking action. Persons wishing the FAA to acknowledge the receipt of their comment submitted in response to this notice must submit with those comments a preaddressed, stamped postcard on which the following statement is made: "Comments to Docket No. 26758." The postcard will be date stamped and returned to commenter. All comments will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report summarizing each substantive public contact with FAA personnel concerned with this rulemaking will be filed in the docket. A final rule will be issued, if it is determined to be in the public interest to proceed with further rulemaking after considering the available data and comments received in response to the Notice of Proposed Rulemaking.

Availability of NPRM

Any person may obtain a copy of this notice by submitting a request to the Federal Aviation Administration, Office of Public Affairs, Attention: Public Inquiry Center (APA-230), 800 Independence Avenue, SW., Washington, DC 20591, or by calling (202) 267-3484. Requests should identify the number of this notice. Persons interested in being placed on the mailing list for future NPRMs should also request a copy of Advisory Circular No. 11-2A, Notice of Proposed Rulemaking Distribution System, which describes the application procedures.

Background

The FAA has the responsibility to establish or discontinue LORAN-C nonprecision approach procedures through the national airspace system when activity levels and safety considerations merit such action.

The FAA, and its predecessor agency, have been developing, approving, and publishing criteria for approach procedures since 1951. Currently, establishment and discontinuance criteria for certain navigation facilities and control towers are published in an internal FAA document: Airway Planning Standard Number One-Terminal Air Navigation Facilities and Air Traffic Control Services (FAA Order No. 7031.2C). The existing document does not include the criteria for LORAN-C nonprecision approaches to runways. The Airport and Airway Safety and Capacity Expansion Act of 1987, Public Law 100-223, section 308 (49 U.S.C. 1348), mandated that certain criteria be promulgated through Federal regulations.

A LORAN-C nonprecision approach procedure is established under FAA Handbook 8260.3B, United States Standard for Terminal Instrument Procedures (TERPS), as amended, which provides guidance for preparation, approval, and promulgation of terminal instrument approach procedures. LORAN-C operates through a low-frequency transmission of timed signals, with controlled coded pulses that furnish nonprecision guidance to pilots with properly equipped aircraft. The LORAN-C signal is transmitted by groups of three to six stations, called chains; each chain includes a designated master station and several secondary stations.

In a separate rulemaking, the FAA published a new part 170 to the Federal Aviation Regulations (14 CFR part 170) to list the criteria on which it will base its decision to establish or discontinue certain navigation facilities and procedures. On January 3, 1991, the FAA published The Establishment and Discontinuance Criteria for Airport Traffic Control Tower Facilities (56 FR 336). It is anticipated that, in the future, part 170 will include criteria for other kinds of navigation facilities and services. The LORAN-C criteria are proposed as subpart C of the new part.

Proposed Criteria

New benefit-cost criteria for LORAN-C nonprecision approaches would be established by the regulation proposed. The criteria are explained in detail in FAA report number FAA-APO-90-5 Establishment Criteria for LORAN-C Approach Procedures. The criteria for LORAN-C approaches require that, to be eligible for establishment, a candidate runway must meet all FAA standards for nonprecision approaches and must have life-cycle benefits that exceed life-cycle costs. Discontinuance criteria state that a LORAN-C approach is subject to discontinuance when the present value of its remaining life-cycle benefits falls below the level of the cost of its continued maintenance.

The economic benefit of the LORAN-C approach is improved efficiency associated with a lower approach minimum which permits the runway to remain open at times when weather conditions would otherwise have closed the airport, thereby reducing flight disruptions. A safety benefit for LORAN-C was not included in the benefit-cost analysis. LORAN-C provides a nonprecision approach signal that guides a pilot to a specific heading that is in line with a runway. Upon

descending to a specified altitude, it is then necessary for a pilot to complete the approach and landing visually or to execute a missed approach if the runway is not in sight. Because the descent to the runway must be made visually, the level of safety is considered the same as landing during visual flight rules conditions.

The costs of initiating a LORAN–C approach relate to investment and maintenance. Investment costs include the initial costs associated with the development, publication, and flight testing of a LORAN–C approach. Maintenance costs consist of annual flight inspection and annual updating of procedures. For discontinuance of an approach, the Agency need only consider maintenance costs. There are no unique added costs to implement the discontinuance decision.

Explicit dollar values assigned to passenger time and aircraft operating costs provide a basis for comparing benefits to costs. LORAN–C economic benefits are based on future aviation activity projected in FAA's annual Terminal Area Forecast which contains airport-specific forecasts. Benefits and cost are based on a 15-year life cycle and are discounted to their present value using a 10 percent discount rate as directed by the Office of Management and Budget. The 15-year life cycle is the same as that used for most other FAA navigational facilities criteria.

How the Criteria Are Applied

FAA would use the benefit-cost criteria to determine the eligibility of runways for LORAN-C nonprecision approach procedures. A runway would be eligible for establishment of a LORAN–C approach procedure when the ratio of the benefits to the costs of establishment equals or exceeds 1.0 and all other requirements of the criteria are met. A LORAN–C approach procedure may be discontinued if the benefits expected to be realized over the remainder of its life cycle fall below its recurring maintenance costs.

Meeting the economic criteria is usually a necessary condition to include a site in the FAA budget; however, it is not a guarantee that a site will be funded.

Criteria Results

Runways at 4,078 airports from the Terminal Area Forecast were examined to determine their current benefit-cost (B/C) ratio. Of this universe, 1,778, or 44 percent, have at least one runway with a B/C ratio of 1.0 or greater with the remaining 56 percent falling below the criteria standard. The results show that 73 percent of the airports not qualifying have a B/C ratio below .25.

Need for the Regulation

This rule is proposed in compliance with the Airport and Airway Safety and Capacity Expansion Act of 1987, Public Law 100–223 (49 U.S.C. 1348), which requires the promulgation of regulations to establish criteria for the installation of airport control towers and other navigational aids. Its fundamental purpose is to improve the efficiency of FAA resource allocation. Also, the rule would assist in the establishment of airport and funding priorities.

Regulatory Evaluation Summary

Introduction

The promulgation of this regulation is expected to have no direct cost impact on the public. There is only a minimal administrative cost to the FAA of applying the proposed criteria. The FAA uses an automated benefit-cost calculation procedure which provides results at minimal cost. This procedure is embodied in the Aviation Data Analysis (ADA) system maintained by the Office of Aviation Policy and Plans. ADA uses a 15-year forecast of aviation activity, as well as economic and other values, to estimate life-cycle B/C ratios. This proposed rule would merely formalize this application of criteria as part of normal agency procedures. The benefit of the proposed rule would be to inform the public of the benefit-cost criteria the FAA uses to allocate resources for establishment of LORAN–C nonprecision approach procedures and further to assure adequate consideration of the efficiency effects of potential LORAN–C approaches. Since this action would have no cost impact to the public and would have a positive, although unquantifiable, benefit, further regulatory evaluation is unnecessary.

International Trade Impact Analysis

This rule has no effect on the sale of foreign aviation products or services in the United States or on the sale of American products or services in foreign countries.

Regulatory Flexibility Determination

The Regulatory Flexibility Act (RFA) of 1980 was enacted by Congress to ensure that small entities are not unnecessarily and disproportionately burdened by Government regulations. The RFA requires agencies to review rules which may have "a significant economic impact on a substantial number of small entities."

This proposed rule would provide a guide for internal FAA management in the establishment and discontinuance of LORAN–C nonprecision approaches. The rule would not have any cost impact; therefore, FAA certifies that this rule would not have a significant economic impact on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

Federalism Implications

The regulations herein would not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government. Therefore, in accordance with Executive Order 12612, it is determined that this regulation would not have sufficient federalism implications to warrant the preparation of a Federalism Assessment.

Conclusion

Since the proposal contained in this FAA document would impose only a minimal administrative cost on the FAA, the estimated benefits are expected to exceed the estimated costs of their implementation. For the reasons discussed above, this proposal, if adopted, would not have significant economic impact on a substantial number of small entities, and a regulatory flexibility analysis is not required. In addition, for the same reasons, the proposal is not a "major rule" under Executive Order 12291 and is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979).

List of Subjects in 14 CFR Part 170

Air traffic control, Navigation (air).

The Proposed Amendment

For the reasons set forth in the preamble, the FAA proposes to amend part 170 of the Federal Aviation Regulations (14 CFR part 170) as follows:

PART 170—ESTABLISHMENT AND DISCONTINUANCE CRITERIA FOR AIR TRAFFIC CONTROL SERVICES AND NAVIGATIONAL FACILITIES

1. The authority citation for part 170 is revised to read as follows:

Authority: 49 U.S.C. app. 1343, 1346, 1348, 1354(a), 1355, 1401, 1421, 1422 through 1430, 1472(c), 1502, and 1522; 49 U.S.C. 106(g).

2. Part 170 is amended by adding subpart C consisting of §§ 170.21, 170.23, and 170.25 to read as follows:

Subpart C—LORAN–C

Sec.
170.21 Scope.
170.23 LORAN–C Establishment Criteria.
170.25 LORAN–C Discontinuance Criteria.

Subpart C—LORAN–C

§ 170.21 Scope.

This subpart sets forth establishment and discontinuance criteria for LORAN–C.

§ 170.23 LORAN–C Establishment Criteria.

(a) The following criteria in paragraphs (a)(1) through (a)(6) of this section, along with general facility and navigational aid establishment requirements, must be met before a runway can be eligible for a LORAN–C approach.

(1) A runway must have landing surfaces judged adequate by the FAA to accommodate aircraft expected to use the approach and meet all FAA-required airport design criteria for nonprecision runways.

(2) A runway must be found acceptable for IFR operations as a result of an airport airspace analysis conducted in accordance with the current FAA regulations and provisions.

(3) The LORAN–C signal must be of sufficient quality and accuracy to pass an FAA flight inspection.

(4) It must be possible to remove, mark, or light all approach obstacles in accordance with FAA marking and lighting provisions.

(5) Appropriate weather information must be made available.

(6) Air-to-ground communications must be available at the initial approach fix minimum altitude and at the missed approach altitude.

(b) A runway meets the establishment criteria for a LORAN–C approach when it satisfies paragraphs (a)(1) through (a)(6) of this section and the estimated value of benefits associated with the LORAN–C approach equals or exceeds the estimated costs (benefit-cost ratio equals or exceeds one). As defined in § 170.3 of this part, the benefit-cost ratio is the ratio of the present value of the LORAN–C life-cycle benefits (PVB) to the present value of LORAN–C life-cycle costs (PVC):

$$PVB/PVC > 1.0$$

(c) The criteria do not cover all situations which may arise and are not used as a sole determinant in denying or granting the establishment of a non-precision LORAN–C approach for which there is a demonstrated operational or air traffic control requirement.

§ 170.25 LORAN–C Discontinuance Criteria.

A LORAN–C nonprecision approach may be subject to discontinuance when the continued maintenance costs (PVCM) of the LORAN–C approach exceed the present value of its remaining life-cycle benefits (PVB):

$$PVB/PVCM < 1.0$$

Issued in Washington.

John M. Rodgers,

Director of Aviation Policy and Plans, APO–1.

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